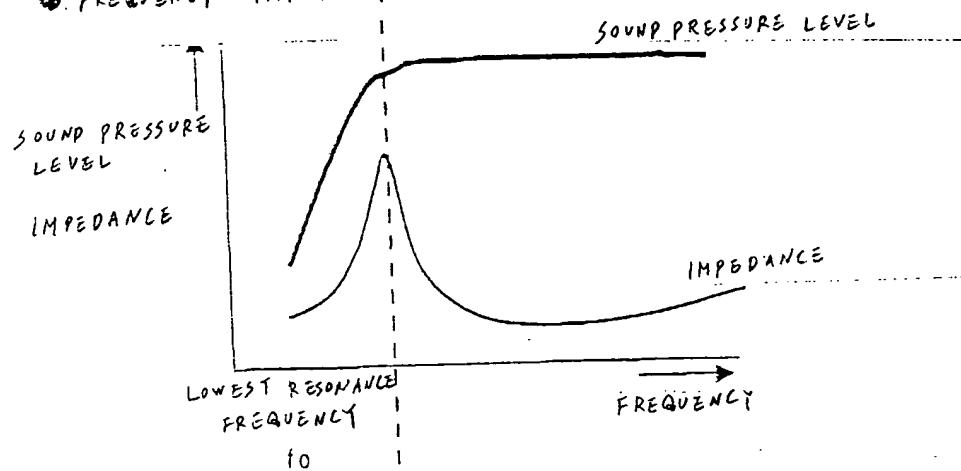


APPENDIX 1

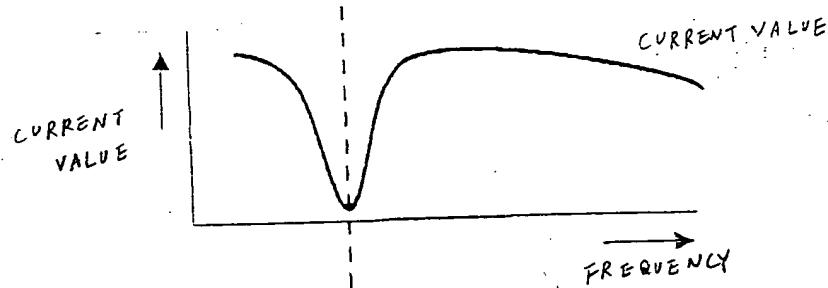


1-A CHARACTERISTIC OF ORDINARY SPEAKER

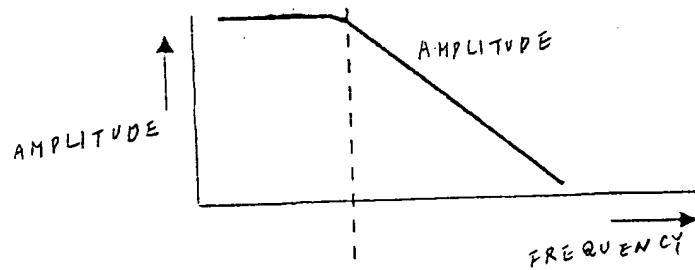
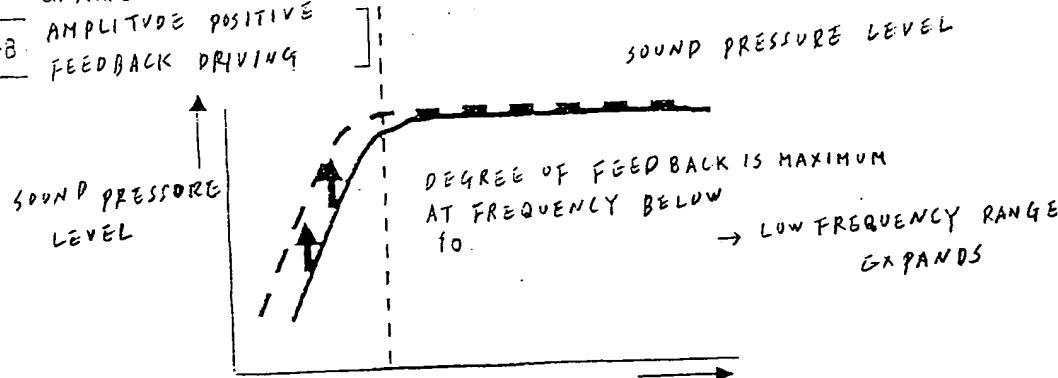
- FREQUENCY - SOUND PRESSURE LEVEL
- FREQUENCY - IMPEDANCE



● FREQUENCY - CURRENT VALUE

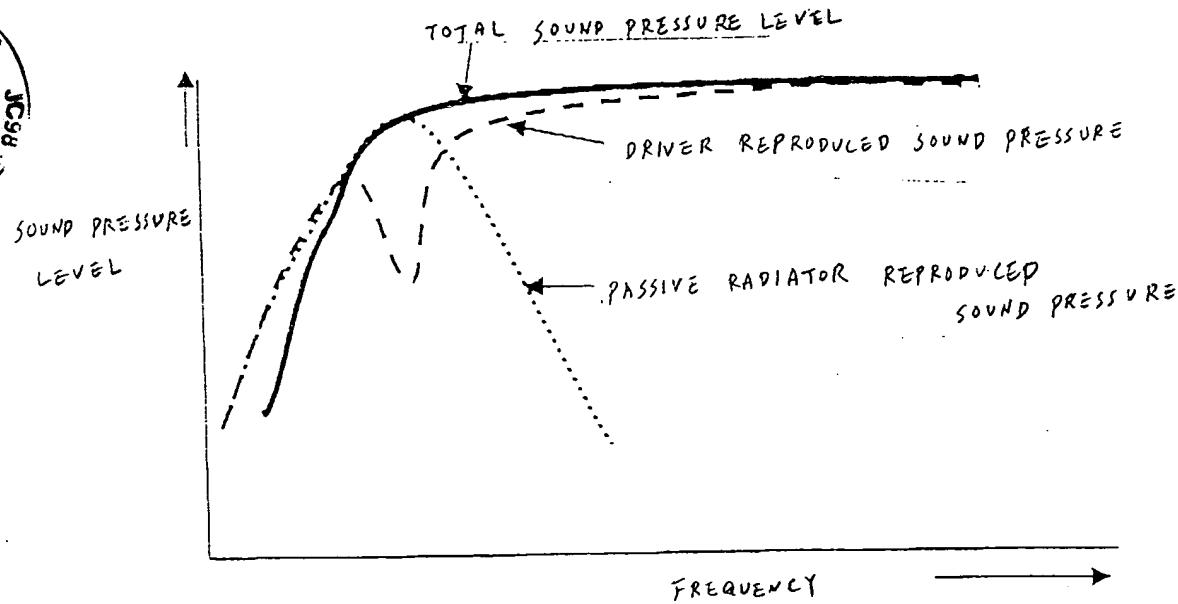


● FREQUENCY - AMPLITUDE

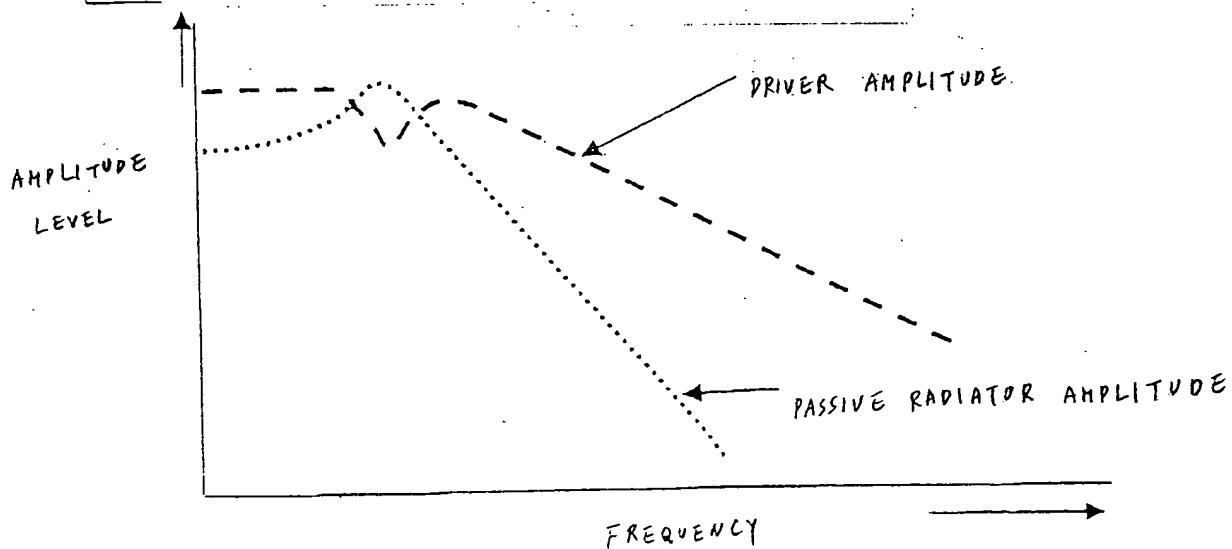
CHARACTERISTIC OF
AMPLITUDE POSITIVE
FEEDBACK DRIVING

APPENDIX 2

REPRODUCED SOUND PRESSURE OF
 2-A DRIVER AND PASSIVE RADIATOR



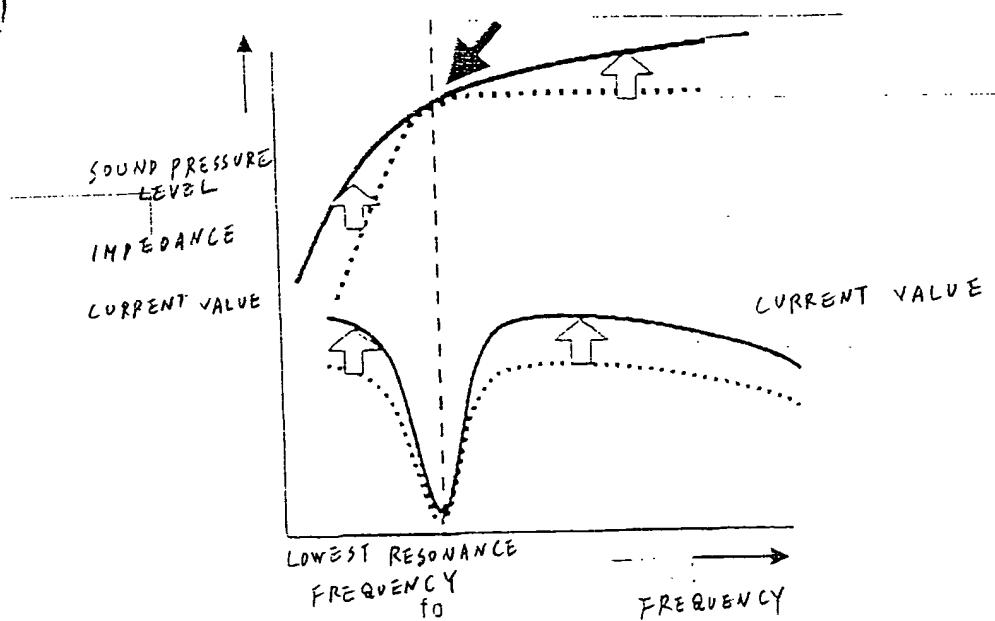
2-B AMPLITUDE OF
DRIVER AND PASSIVE RADIATOR



APPENDIX 3

CURRENT POSITIVE FEEDBACK OPERATION (NEGATIVE IMPEDANCE DRIVING)

→ WHEN CURRENT FLOWS, THE CURRENT FURTHER FLOWS OWING TO POSITIVE FEEDBACK
 → DEGREE OF FEEDBACK IS MINIMUM AT f_0



ADDITIONAL
APPENDIX

: EQUIVALENT CIRCUIT OF PASSIVE RADIATOR AND ITS OPERATION

VOLTAGE F : DRIVING FORCE

CURRENT I : VIBRATING SPEED

R_{drive} : EQUIVALENT MECHANICAL RESISTANCE OF DRIVER VIBRATING SYSTEM

L_{drive} : EQUIVALENT MASS OF DRIVER VIBRATING SYSTEM

C_{drive} : EQUIVALENT COMPLIANCE OF DRIVER VIBRATING SYSTEM

R_{passiv} : EQUIVALENT MECHANICAL RESISTANCE OF PASSIVE RADIATOR VIBRATING SYSTEM

L_{passiv} : EQUIVALENT MASS OF PASSIVE RADIATOR VIBRATING SYSTEM

C_{passiv} : EQUIVALENT COMPLIANCE OF PASSIVE RADIATOR VIBRATING SYSTEM

$C_{cabinet}$: EQUIVALENT COMPLIANCE OF CABINET

RECEIVED

MAR 27 2003

R_{drive} L_{drive} C_{drive} R_{passiv} L_{passiv} C_{cabinet} Technology Center 2600

F \sim

C_{cabinet}

① FREQUENCY HIGHER THAN RESONANCE FREQUENCY:
 ONLY DRIVER VIBRATES, BUT PASSIVE RADIATOR DOES NOT VIBRATE

R_{drive} L_{drive} C_{drive} R_{passiv} L_{passiv} C_{passiv}

F \sim

I

C_{cabinet}

③ RESONANCE FREQUENCY: CABINET COMPLIANCE AND PASSIVE RADIATOR PRODUCE PARALLEL RESONANCE AND AMPLITUDE OF PASSIVE RADIATOR BECOMES MAXIMUM.
 OWING TO PARALLEL RESONANCE, IMPEDANCE BETWEEN A AND B IN EQUIVALENT CIRCUIT INCREASES AND DRIVER AMPLITUDE DECREASES.

R_{drive} L_{drive} C_{drive} R_{passiv} L_{passiv} C_{passiv}

F \sim

C_{cabinet}

B